

**Attachment to
Summary of the Public Information Meeting and Public Hearing
to Obtain Comment on the Proposed Air Pollution Control Permit to Construct
for the GTL Energy Coal Beneficiation Plant**

Presentation Handouts

**North Dakota Dept. of Health
Division of Air Quality**

**Air Pollution Control
Permit to Construct**

**GTL Energy
GTLE Dakota Plant 1 LLC**

GTL Energy Timeline

- Permit analysis completed, public comment period held from Feb. 6, 2009 to March 9, 2009
- A number of comments were received
- Public meeting scheduled
- Comment period extended to May 8, 2009

Agenda

- Presentation
 - Who we are
 - What the permitting process is
 - What the proposed project is / Results of our analysis
- Opportunity for Informal Questions and Clarifications
 - These will not be recorded
- Opportunity for Formal Comments
 - Department will respond in writing to the formal verbal comments received tonight and all written comments received by May 8, 2009 (this includes all comments submitted to date)

ND Dept. of Health Environmental Health Section

- **Waste Management** – Solid Waste,
Hazardous Waste, Underground Storage
- **Water Quality** – Surface Water, Waste Water,
Ground Water
- **Municipal Facilities** – Public Water Systems
- **Air Quality** – Regulate Industrial Emissions,
Monitor Ambient AQ

Division of Air Quality

- Regulate Air Quality to include:
 - Issue Air Quality Permits
 - Permit to Construct
 - Permit to Operate
 - Conduct Inspections of Air Pollution Sources
 - Require Emissions Testing and Reporting
 - Compliance Evaluations
 - Enforcement Actions
 - Monitor Air Quality Throughout the State

Two Key Components

- Is each stack in compliance with permit?
- Are resulting emissions from all stacks in compliance with ambient standards?

ND Air Pollution Control Rules

- At least as stringent as federal EPA requirements in all cases
- More stringent than federal requirements in several areas
 - More requirements for smaller sources
 - State Air Toxics Policy
 - Covers uranium, beryllium, etc.
 - More emissions testing, inspections, monitoring, etc.

Air Quality Permitting Process

- Receive Complete Permit Application
- Prepare Detailed Analysis
 - Identify emissions
 - Identify Regulations that are applicable
 - Review combined impact of the proposed facility and all existing facilities
 - Determine if emissions are expected to comply with all applicable air quality rules

Air Quality Permitting Process (continued)

- Prepare draft permit - include necessary operating restrictions / conditions / limits to ensure compliance with the air quality rules
- Public Comment
- Issue permit as proposed, modify permit or deny permit
 - Decision is based on the Air Quality Rules

Air Quality Permitting Process

■ Permitting Process Does Not:

- Create new rules, laws or policies
- Attempt to predict future rules, laws or policies
- Consider zoning issues
- Evaluate potential nearby facilities for which a complete application has not been received

Permit to Construct

■ Allows Construction and Initial Operation (during initial testing and compliance verification)

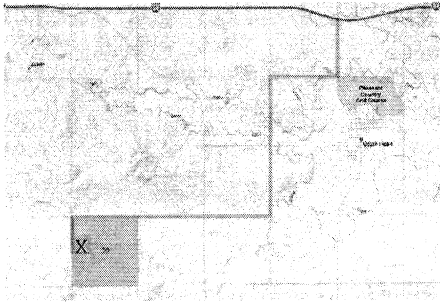
- A minor source is allowed to begin construction but is not allowed to operate until a permit is issued
- Any construction before a Permit to Construct is issued is done at the owner's risk
- Permit to Operate issued following demonstration of compliance

GTL Coal Beneficiation Plant

■ Will dry and briquette coal

- Removes approximately 80% of moisture from the coal
- Heat is generated from the combustion of natural gas in a boiler

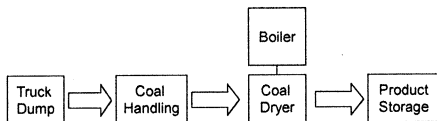
GTL Energy Location



Equipment

- Natural gas-fired boiler
- Coal dryer
- Natural gas-fired emergency generator
- Coal handling equipment
 - Truck dump
 - Raw coal storage, handling, conveying and crushing
 - Product coal storage and handling

Process Flow



Fuels

- Only natural gas will be combusted at the facility
- No solid fuels will be combusted

Emissions Controls

- Four baghouses (fabric filters)
 - Control coal dust emissions
 - Remove 99%+ of coal dust
 - Best control available for coal dust
 - Proven technology

Total Facility Emissions (potential)

Air Contaminant	Emissions (tons/year)	Major Source Level (tons/year)
Particulate Matter	22.4	100
Nitrogen Oxides	15.0	100
Carbon Monoxide	10.2	100
Sulfur Dioxide	0.3	100
Volatile Organic Compounds (VOCs)	6.5	100
Hazardous Air Pollutants	2.3 (total)	10 (any single) 25 (total)

Ambient Air Quality Standards

- Maximum Concentrations of Pollutants Allowed in the Ambient (Off Property) Air

Predicted Small Particulate Matter (PM-10) Emissions Impact (micrograms per cubic meter)

Averaging Period	Maximum Predicted Concentration*	Background	Total	Ambient Air Quality Standard
24-hour	12	30	42	150
Annual	1.6	15	16.6	50

* Note that this is the maximum concentration and is predicted to occur close to the facility. Concentrations are expected to drop off dramatically farther away from the facility.

Predicted Beryllium and Uranium Emissions Impact (micrograms per cubic meter)

Pollutant	Maximum Predicted Concentration*	Guideline Concentration	Factor Below Guideline Concentration
Beryllium	0.00008	0.001	12.5
Uranium	0.00021	4.0	~ 19,000

* Note that this is the maximum concentration and is predicted to occur close to the facility. Concentrations are expected to drop off dramatically farther away from the facility.

Greenhouse Gas Emissions

- Maximum carbon dioxide emissions of approximately 32,000 tons/year
- Currently no rules restricting carbon dioxide emissions
- Proposed EPA rule will require reporting of carbon dioxide emissions
- Greenhouse gas emissions are expected to be addressed on a national level

Carbon Dioxide Emissions

GTL	Dickinson State	State Penitentiary
32,000	24,150*	32,850*

* Estimate based on 7 months of heating.

Visible Emissions

- Steam plume can be expected from the coal dryer and the natural gas-fired boiler
 - Plume will be more apparent when outdoor temperatures are low
- Little to no visible emissions expected from the coal processing baghouse stacks

Other Possible Facilities

- South Heart Lignite Mine (300,000 tons of coal/year)
 - Application has been withdrawn
- Gasification Plant and Associated Lignite Mine
 - More complex air quality review process is required

Current Permit Application Status:

- GTLE Dakota Plant 1 LLC
 - Application is complete
- South Heart Lignite Mine
 - Application withdrawn
- Gasification Plant and Associated Lignite Mine
 - No application has been submitted

Summary

- Permit application for the GTL facility has been thoroughly reviewed
- Emissions from the GTL facility are expected to be minor and are expected to meet all air pollution rules
- GTL facility will be installing the best controls available to control particulate matter emissions from the facility
- GTL facility will not combust solid fuel

Summary (continued)

- Air emission permit will require testing to show that actual emissions are in compliance
- Emissions from the GTL Energy facility will be considered in the analysis of any future facilities
- Based on the findings of the Department, it is proposed that an air quality permit be issued to GTL Energy

Contact

Questions regarding the GTLE Dakota 1 LLC air pollution control permit may be addressed to:

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Public Comments

Comments on the GTLE Dakota Plant 1 LLC air permit must be received by May 8, 2009.

Send written comments to:

North Dakota Department of Health
Division of Air Quality
918 E. Divide Avenue
Bismarck, ND 58501-1947
